

**ENGINEERING HERITAGE AUSTRALIA**

**ORAL HISTORY PROJECT**

**TRANSCRIPT OF INTERVIEW WITH**

**JIM GILL AO**

Interviewer	Doug Ayre
Transcriber	Mary Macfarlan History Development Pty Ltd
Date of Interview	1 February 2016
Duration	2 hours 15 minutes

## **NOTES TO THE READER ON INTERPRETATION OF THIS TRANSCRIPT**

Readers of this oral history transcript need to be aware that it is a near verbatim transcript of the words as spoken during the interview that was conducted in the form of a natural conversation between the interviewer and the person being interviewed. Some changes have been made to clarify what was intended to be said and to facilitate the flow of the document.

Much of what is said in such interviews relies upon the accuracy of the memory of the person being interviewed and readers should bear this in mind and judge for themselves how factually accurate the material is. The interviewer has sought to clarify or verify facts and statements made during the interview with the interviewee where this seemed appropriate.

The views and opinions expressed within the transcript are those of the person expressing them in the interview.

Please refer to the notes on the following page to aid interpretation of the transcript.

### **Note 1**

The recording runs for a total of 2 hours and 15 minutes.

### **Note 2**

Where the interviewer has used words such as 'Yes', 'Right' or 'OK' as an encouragement, but not as anything else then these words have not been transcribed unless they are relevant for the context. Commonly used habitual phrases have also been deleted from the transcript.

### **Note 3**

The interviewer has inserted occasional words (which are not in the original recording) into the transcript in order to clarify the context of what was being said. These words are shown in the form [they would say].

### **Note 4**

Where a sentence has a series of dots in the text such as ..... this indicates that the speaker paused, the recording was not clear enough to transcribe accurately what was said or the following speaker interrupted what was being said.

### **Note 5**

The interviewer is referred to as 'DAA' in the transcript and to the subject speaker is referred to as 'JG' as appropriate.

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## INTERVIEW TRANSCRIPT

### Track/ Speaker

### Time

1/00      DAA      My name is Doug Ayre, the date is the 1<sup>st</sup> of February 2016 and I'm interviewing Dr Jim Gill on behalf of Engineering Heritage Australia in Western Australia. Dr Gill may I call you Jim?

            JG      Certainly.

            DAA      Thank you. Now what I'd like to do is first of all start with some basic information about yourself. Where were you born?

            JG      I was born in Perth.

            DAA      Right, so you're a local lad?

            JG      Indeed.

            DAA      Where did you go to school?

            JG      I went to Como State School as a primary school and then I went to Applecross High School. Applecross Senior High School.

            DAA      And after high school?

            JG      After that I went to the University of WA and then I went to Cambridge and later in my career I spent a year at Harvard.

            DAA      So, at UWA you did a degree, did you?

            JG      I did. I did a civil engineering Bachelor of Civil Engineering and got First Class Honours in that.

            DAA      Good on you. Alright and then you went on to Cambridge University?

            JG      I did. I went pretty much directly on to Cambridge and did a PhD which took about three and a half years. Had a wonderful time.

            DAA      I bet you did.

            JG      Delayed growing up by a good amount of time.

            DAA      We all should do that I think. And you enjoyed Cambridge

obviously?

JG Immensely.

DAA Yes. So, the PhD, what was that in?

1/02 JG Well it was in the same field as my Honours at UWA. Because my Honours was in computer aided design of structures, in that case two-dimensional frame works and, in my PhD, I just continued it on to three-dimensional - in fact shell structures, rim structures, and so on. In my Honours work it was using computerised matrix analysis of frameworks, established techniques, and then by the time I was doing my PhD it was finite elements and they were becoming established.

But what happened in my Honours and PhD work was bringing it into interactive computing so for my Honours work we used the first - in fact it was the first - computer display screen ever sold commercially. [It] was made by Digital Equipment Corporation in Massachusetts and it was the first time [that] computers had screens on them that you could just buy like that. It was a PDP 6. And so, the Honours work was combining matrix analysis of frameworks which you could already do on a computer with an interactive graphics approach to assembling the structures and then showing their deflected shapes and bending [moment] diagrams and all that sort of thing.

And then in my first year I just went on and did the same sort of thing but it was using a three-dimensional graphics package on the same kind of computer screen and using interactive languages. You could sit at a keyboard and [literally] talk to a computer which was a foreign concept in the '60s. These days everybody does it. These days you don't even need a keyboard but using a keyboard to interact with a computer - was something that came in in the [mid] '60s so that's what we were doing then.

So that was the story basically and it was the same sort of matrix analysis [we were] using at Cambridge. It was finite elements I combined it with a 3-D design package which had been designed by

another PhD student at Cambridge using a type of parametric [bicubic] curve to define structures. So that was it.

Nowadays of course all that stuff is [passé] - I mean I'm talking 45 / 50 years ago. [Now] you buy that sort of stuff in packages and run them on your PC.

DAA You and I both were leading edge in our time, weren't we?

JG Yes, in a way. Yes, that's right.

DAA I presume, prior to the screen, like myself you'd have been using printed tape outputs and this sort of thing, were you?

1/05 JG Yes. The original input I used was punch cards and then of course paper tape and then line printers and things like that. And originally no electromagnetic storage you know. You'd store stuff on punch cards and paper tape and then magnetic tape came in in different forms and then discs came in and all this sort of stuff. Then you ended up with integrated circuits and large scale integrated circuits and it's all gone on from there. The grass grows under your feet comprehensively about every five years in that game.

DAA Mmm yes. So, you'd be inputting using cards or punch tape storing the data in the same way and inputting that [and] writing your own program probably?

JG Yes - all writing your own programs.

DAA And then the output was on cards or tape and similarly your printed outputs were either on tape or on printed sheets?

1/06 JG Yes. But the work I was doing was more towards using interactive graphics. So, at UWA it was - actually - we used light pens to an extent. You could point at the screen and it would [respond]. So it wasn't a touch screen but it was a light pen screen and you could interact graphically with that and using a keyboard.

And then, of course, the output would come in sort of stress diagrams and deflected shapes. All that was visually presented and you could



zoom in on different bits and see where structures were likely to fail and [so on. That] was all good fun in those days.

DAA Well it still is of course.

JG It still is.

DAA Only it was very 'hands-on' wasn't it?

JG That's right. And the thing is you had to with both of those things [given that] computers weren't anywhere near what they are now - I mean a university computer would have had a lot less computing capacity than an iPhone for example - and so if you used the computer in the daytime to do the big matrix analysis then you were [considered] pretty antisocial. So, the thing to do was to book the computer from one AM to five AM and run those very long analyses and hope they didn't [crash] half-way through.

So that's what one used to do. Stay up late at night when nobody else wanted the main computer of the university and then do all your [number] crunching then. And then do the interactive stuff during the day time.

DAA Well I did similar stuff when I did my Engineering Degree in the early '60s and I think we used a PDP 11. It just sat in a room - fairly large room - and it was 'guarded by the dragon at the gate' and if you didn't get on well with her you didn't get time on the computer.

JG That's right.

DAA Alright. So, you also mentioned doing a Masters at Harvard?

1/08 JG Yes, well that was when I was in my mid-30s. By then I'd been in charge of Main Roads Kalgoorlie Division for a couple of years and by then we had three kids so we took off to [Harvard]. It was a one-year course and it was really great. Actually, a lot of it was a Masters in Public Administration which turned out to be very relevant because it dealt a lot with politics and public relations, customer service, power and influence, all this sort of stuff and you learn a lot not only

from your lecturers but from your class mates as well.

A lot of handling the media and diplomacy and all this sort of stuff which later in my career was incredibly useful especially when I was at the Water Corp.

DAA I suppose that at the time that you're learning you don't always appreciate how valuable it's going to [be].

JG No, you don't. No. In fact, it got more valuable as time went on in my career because I did it in 1983, I completed it. And it really it was useful but it really came into its own from about 2000 onwards when it stopped raining around here.<sup>1</sup>

DAA Yes. Okay, we'll come to that later.

Alright now, I think then having graduated you commenced work with the Main Roads Department?

JG Yes, well I was a Main Roads Cadet from age 17. I would work for them in the holidays and that was good. Then I took leave from them when I went to Cambridge. I had scholarships from elsewhere but they did support me when I went to Harvard. They actually paid me when I went to Harvard because I had three kids by then. [That investment in the development of young people was a terrific initiative of then] Main Roads Commissioner Don Aitken]. Very often he'd made a practice of sending sort of 'up and coming' young engineers off to somewhere in the US to do a Masters. Usually they'd get an International Road Federation Scholarship and then he would top them up with whatever money was required to support them and their families through a year at one or other US universities. There would have been probably a dozen bright young people went off to these things. It was Don's leadership and audacity as a leader - he struck a different path from other public service chiefs - and so we were lucky in that sense.

DAA Yes, I have interviewed Don.

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<sup>1</sup> Reference to the reduction in annual rainfall due to climate change.

JG I know, yes.

DAA And I know that he was very proud of that program.

1/11 JG And that was fantastic. Great leadership. And, in fact, the whole Cadetship thing was part of that. I suppose pretty much everywhere I've really worked for any period has had the Cadetship thing and at some stage and the benefits of it have always been really obvious to me in terms of the calibre of people.

Sure, you lose a third of them or half of them. It doesn't matter. The ones you keep are [the] high quality people around the place

DAA Yes, it's very similar to what I did in the UK what we called a Student Apprenticeship where you were employed and studied at the same time.

JG That's right.

DAA It was a good outcome. You came out of it being fairly experienced, didn't you?

1/12 JG Well you did and you had a lot of loyalty to the organisation. But more than that you had [developed] a length of view [because] you actually cared about the future of the organisation including long after you yourself [retired]. So, you had this - it was a post-war characteristic I suppose that people like Don Aitken had because they had ..... It was really a compulsion to look way ahead and to plan way ahead and to influence others to plan way ahead.

DAA Would you say that you were a person who could see the big picture?

JG Oh, I would think so. Yes, I guess I would say that. Well if you go back to Main Roads Main Roads under Don and others and Ken and Albert and all those people it was a highly influential and highly respected sort of an outfit and it was Main Roads that drove the planning of the state. Sure, there were always other bodies involved but Main Roads made it happen.

They had to get their own job done but they very constructively

influenced everybody else and I think that's the sort of attitude that I carried on to those other places. Not to say that the Water people didn't have that sort of attitude but it was just something that, you know, it was a great strength of those big outfits I think.

Sometimes when they got horribly politicized - such as, I suppose, Western Power - then their ability to forge out ahead to look that far ahead was greatly [curtailed]. I think politicians don't particularly like public servants to be looking that far ahead but because it means that it reduces their own initiative and importance. [But in my view it's the obligation] of the public service leaders to do it [for the public]. You can do it and if you [choose to] do it then you take the high ground and you've got a lot of influence and credibility.

- 1/14      DAA      Well dare I say that it's not only [their] prerogative but it's their responsibility?
- JG      I think so. And they've got to breed organisations which will carry that on and that's why the Cadetship, and Don Aitken's programs, and their career development, and all that [are] so valuable I think. But they don't always survive those sorts of attitudes in organisations. There are plenty out there that have lost it.
- DAA      Yes, I'm thinking of things like the 'Stephenson Plan' which I thought was amazing.
- JG      Mmm oh, [that was] fantastic.
- DAA      I came here in 1971 by the way. And then there was the 'System 6' environmental issues.
- JG      Yes, that's right.
- DAA      It was really thought through, wasn't it?
- JG      Mmm. That's good.
- 1/15      DAA      Alright. So, you started with Main Roads as a Cadet?
- JG      Yes.

DAA Studied, qualified, and you mentioned that you were with the Kalgoorlie Division?

JG Yes.

DAA What did you do there?

JG Well I was the DE - the Divisional Engineer - so I was in charge of the division for two and a half years. Not a long period but there was a big project on at the time which was building a road from Lenora to Leinster.

DAA Right. I was in Kalgoorlie for four years by the way so I know it fairly well.

JG Were you?

DAA Yes.

JG So, I built that road from mid '80 to mid '82.

DAA Leinster would have been a nickel project, then wouldn't it?

JG It was a big one, yes. And the road was 134 kilometres and we had to build it in just over a year so that was good fun. Against all the [odds] the weather was against us and we had all the usual sorts of problems but that was good.

DAA So, you didn't get the bulldozer driver and say just keep going north did you?

1/16 JG Oh yes, everybody wanted to do that including me but [a key factor was] the money.

DAA Alright. So, with your structural analysis interest then how did you use that with Main Roads Department?

JG Well, I joined the bridge section. Ken [Michael] was my boss and I got into bridge designing. In fact, there are [some] somewhat complicated bridges. We were building some relatively complicated, for the time prestressed-concrete bridges which were curved and so they required some fairly complicated analysis. If a bridge just goes

in a straight line [then] it's relatively easy but then you put curves and you get all sorts of effects including torsional effects. I guess I'd always wanted to actually design and build things. I actually used proprietary software to do the analysis of that but you had to pretty much write [quite a bit of] the [software yourself]. And then there was all the business of torsion on bridges that go around curves and all that kind of stuff so Ken and I had a good time doing that and [those bridges are] still standing.

DAA Don't sound so surprised.

What about pavements and foundations?

1/18 JG Oh well I did some of that in bridge design you know. The usual stuff [of] piles and spread footings but then I worked for a year or so in materials section in Main Roads which was about pavements and so on. That was interesting enough but it was sort of a fairly short period of my career and nothing particularly [notable] happened there. And then after that I went to Carnarvon for a short period but then Don Aitken wanted me to be his technical assistant.

DAA Yes, he mentioned that.

JG So, I did that job for a couple of years which was sort of interesting I suppose going to federal meetings.

DAA Well that would give you the right hand of really the boss, wouldn't it?

JG Yes, and you could see how things happened at the top level. And it was good to see Don in action. So yes, that was quite a good.

DAA I do know that was deliberate on his behalf.

JG That was what? Deliberate?

DAA It was deliberate to have people as aides [and] to introduce them.

JG Deliberate. [Undoubtedly] it was, yes. And it was good experience I have to say and, you know, you did learn a lot just by knocking around in those [meetings]. You were the right hand of the CEO [at]

interstate meetings and it was good. Sometimes you were doing stuff that was terribly [routine], almost secretarial, but, no, it was actually good experience.

- 1/19      DAA      Yes, based on my limited experience you'd be making useful contacts?
- JG      Yes, you did. You did and it was a good thing to do.
- DAA      Good.
- JG      And then I went off to Kalgoorlie after that.
- DAA      Kalgoorlie's an interesting place?
- JG      Oh, it's great. Love it.
- DAA      Yes, I loved it. Alright, so you lived in Kalgoorlie?
- JG      We did, yes.
- DAA      But the area that you'd have covered would have been fairly wide?
- JG      It was. It went out as far as Eucla and Warburton and Northern Territory border. It was an interesting job dealing with a day labourer and contractor type work force was good. I enjoyed all that stuff. A bit rough at times.
- The kids the family was very young then so it was good to be in a big country town.
- 1/20      DAA      You'd have been dealing a fair bit - based on my experience again - with politicians I suppose?
- JG      That's right. I got to know quite a few politicians and local government people and some of the interesting politicians in Kalgoorlie you know. You get some head-strong ones and some shady ones.
- DAA      You've no need to put names to them but I know who you're talking about.
- JG      No, I won't but you get all sorts actually.

DAA You do.

JG And you have battles with people but you've got to live with them so it's good for a bit of developing a few skills.

DAA It's interesting is it not to be in a community like that to have to do your job but also be part of the community?

JG It is. The best part of being in one of those country towns is being so far from your boss in Perth.

DAA I used to say that I was far enough away to be left alone and close enough to get help if I needed it.

JG Yes, well that's right. That's right. I had a good time: it was really quite good.

1/21 DAA Did you get involved in organisation reviews and this sort of thing?

JG Well later on I did especially because when I got back from Harvard I reviewed different bits of the organisation - the traffic management area and the planning area. I think in those places you do get fiefdoms being formed and you get areas where people are [often] guarding their own interests and there's a bomb needed sometimes [to change that]. One way of going about that is to get people to do reviews like 'internal management consultants' and so I did a few of those when I got back from Harvard at the behest of Don basically. And that was good.

I don't know how effective they were in the end. I think in some cases, well, look I don't know - it all depends how you get major change done in all organisations you get 'dug in areas' that need to be changed and don't actually get changed until there's a crisis.

DAA Sure. But, I presume you could have played the role to some extent of being a catalyst for change?

JG Well that was it. That was the whole thing. Yes, that's true. I, actually I'm not sure that those things happen terribly [often]. It's difficult for a leader of an organisation when you get one like Main Roads - that's



actually been so good at career development, recruiting, and developing people, and building loyalty, and aligning people's values, and that kind of stuff - it's more difficult especially if you're from within to change that organisation then.

So, what I found later on was that going into an organisation as an outsider knowing nobody, owing nobody, but listening to everybody, was you could change things. You could stimulate people to change things. You could help people see what they could already see basically but that was obvious and then they'd act on it. Sometimes the older people wouldn't act on it [and] therefore you had to tap into the young bloods and sometimes you had to be do some rather nasty things around the place. But that's all the boss's job, isn't it?

DAA Yes. What about funding and budgeting and this sort of thing. Did you get involved in that?

JG Not really.

DAA Okay. I ask you these questions because having that experience with Harvard it would have sort of brought that into your area more so than many people I suspect?

1/24 JG Well I was never involved in the financial side directly. Obviously running my own divisions and stuff like that I was and when I was in charge of organisations, well you couldn't get into the detail yourself. You got in at certain key points like the beginning and then at review points and then at the end. You had to have competent people and you'd set priorities and then let them get on with it.

DAA Yes, indeed.

JG That's what happened. You had to do that and you couldn't do it any other way and if you didn't have that then you had to change the people in some circumstances. In some [situations] you simply had to do that.

DAA Well it's the old saying isn't it 'if you can't change the people then you change the people' don't you?

1/25 JG Well that's right. That's right yes. So that's what one did but you had to get to the stage where you weren't doing that sort of thing yourself because you'd just die and it wouldn't be done very well either.

DAA No?

JG No. I think I was kind of - in some ways - I would never go into an organisation where there weren't good people. So, in other words there might be some people who I didn't consider very highly in an organisation but there had to be some who I thought were terrific and if there weren't any people who I thought were terrific then I wouldn't think of going into the organisation. You know what I mean?

DAA Yes.

JG Because it's beyond me to actually repair an organisation if there aren't some good people in there whom you can tap and put into key positions when you're dealing [with change and] when you're reshaping it. For example, with the Railways and with Water I knew both those organisations had good people in them. I knew that they also had 'dead wood' or people who actually needed to be kindly moved on. That kind of stuff.

But I was asked at different times to do different jobs - non-engineering type ones like education and health - and in those ones I wasn't confident that there were people who you could surround yourself with. They had to be internal people mostly. I wasn't confident that you would have people there who could do a job that I thought was going to be good enough in some ways and so I didn't go into them. And so, in some ways engineering ended up - I have to admit - the engineering utilities were a bit of a comfort zone for me. I knew that places like the Railways and the Water Corp had great people in them even if they had others that needed to be moved along. Know what I mean?

DAA Yes, I do.

1/27 JG So that's why I stuck to those. You could take a thing like Western

Power - I never got into Western Power.

DAA Oh, I did.

JG Yes, I know. I was confident that Western Power had good people in it [but] I was horrified by the political interference with the place and I don't think the leadership was very good politically either over decades. One of the problems with having longstanding barons running [an organisation] is that they become so personally powerful that others outside can't wait for them to leave so that they can get at the soft underbelly. [People down the line have been protected and have never had to pick up the instincts and the skills. Apparatchiks, lobbyists and competing bureaucrats can start to] pick the place apart [from outside] and the [organisation] is left defenceless. So that's actually one of the problems having people at the top who are too powerful for too long as I see it. [They need to throw younger talent off the deep end and late to be prepared to be threatened by them].

DAA Yes, sure.

JG And there are plenty of examples. I mean Health and Education have both - they're much more complicated politically anyway those outfits.

DAA Most of the major bureaucracies?

JG Oh yes. But engineering utilities the utilities are great because they're somewhat separate.

DAA Okay, we'll just stop there.

2/00 DAA Let's just come back to Main Roads Department Jim. How high up the ladder did you climb in Main Roads Department?

JG Oh well I got up to - there was the Commissioner there were two Assistant Commissioners and then there was my level so it was a General Manager level. What did we call ourselves? Executive Engineers or Principal Engineers they were called. Principal Engineer was the term used in those days. I'm sure it's not used now but that's what it had been for quite some time. And there would have been

about eight people at the Principal Engineer level. They were all great people. All good highly competent people.

DAA Now after Main Roads then where did you go then?

2/02 JG Well I went to the Railways then. I actually went on about a one-year trial first up just to see how I went. I went in as a Principal Engineer type of level - the same sort of level as I'd been in Main Roads - and I was in charge of sort of corporate services. Which means human resources - industrial relations, which was a big one in the Railways - information technology and bits and pieces like that. Not finance.

So that's where I was for maybe 15 months I suppose and during which time the previous Commissioner who was a civil engineer called Ian McCullough - he retired so his job came up and I got it much to my horror. I thought this was amazing but anyway I got it and so I stayed there for about seven years and that was great.

It was a fantastic organisation because it had had good career development but all within silos. And, in fact, about 1976 when [the new headquarters was built] that was the first time that Railways had ever come together in one building.

DAA This is at East Perth, is it?

JG Yes. I mean it was almost seven different Railways I can't name them all but there was the chief civil engineer's [department], there was the chief mechanical engineer, there was another engineer who was mechanical but was in charge of all the running shops all the workshops around the country that was called Motive Power. Then there was the chief traffic manager. There was the communication engineer, the chief signals engineer - well they combined those two. There was the secretary's branch which was station masters and all that. Then there was finance. It went on and on.

There were seven different fiefdoms. They didn't sit in the same building they had different cultures. And that's the way Railways had been for 200 years. They grew up that way. There was actually

no shortage of good people but there was a lot of 'inbreeding' [with] all the problems you get of organisations that have just grown and become a bit 'pot bound'.

So, it was terrific to come in as an outsider not owning any of that and actually identifying people around the place, swapping a few people around, taking opportunities as people retired and doing some cross appointments and rethinking the whole.

DAA      How long did it take? How long does it take before you can actually make your mark though?

2/04      JG      It starts happening immediately because you start by asking people questions they never thought they'd be asked. You start by getting people thinking differently and without deliberately doing it just by being different and acting differently. And getting them thinking in different directions and unleashing them to think that there are things that were always lurking there that they can actually do now and bring this place forward and make the future better.

And then shifting - actually shifting inappropriate appointments - dealing early with people who just have been miscast in an organisation. That might mean moving them out of the organisation but sometimes it can mean shifting them within. Actually, it does a lot for morale because all the people who are good performers, see change afoot [and see the] opportunity happening to move towards a new future.

As the chief executive how do you make those decisions? I can tell you, you make them fairly quickly and you do get about 85% of them right. You don't get them all right. And so, some of those are a bit regrettable and some of the appointments you make - you get 85% of those right too - you don't get them all right.

DAA      That's not a bad average, though, is it?

JG      Well yes, it's not bad but you got to feel sorry for the ones who [have been] miscast and [especially] the ones you've miscast yourself.

They've had a hand in it [the decisions] themselves of course.

Then just involving people in doing environmental scanning and normal strategic planning. Getting people into a room and helping them think about things that they've never been asked to think about before and yet have been thinking about all along, you know.

So, they start making a difference immediately.

2/06      DAA      Yes, the word that comes to mind is 'empowerment'.

JG      Yes, sure. And then the other thing is relationships with everybody internal and external and the sort of people you talk to out there and the sort of people you take with you and the way you openly discuss [issues]. And if somebody's got a problem with you it's almost a [case] of staying close to your friends but much closer to your [supposed] enemies. Always engage and once you start doing that and other people see you doing that [and] then it changes the organisation a lot.

Anyway I ,don't think it's ever comfortable running these places. I think it's always bloody difficult. Plenty of sleepless nights.

DAA      Well, there's a lot of politics both internal and external isn't there?

2/07      JG      Oh who said somebody said - it was in Hamlet I think – 'uneasy lies the head that wears the crown'.

DAA      Yes.

JG      But anyway, that's very, very true. It's never, never easy. Even when it's easy it's not easy.

DAA      Yes, I'm sure that's true.

Alright, so, during your time with the Railways you would have actually been involved in quite a bit of technical change. I mean to my mind you would have been there at the time that the electric trains were being developed?

JG      Yes, that's true.

DAA      What was your involvement with them?

2/08      JG      Well, the electric trains weren't really new technology. They were all over the world and in fact that project kicked off - was kicked off - before I got the top job. There was a man called John Hoare who had been the chief civil engineer who actually went to run that project. Did a fantastic job. And so that happened on my watch yes, but it was happening when I took over.

Then the other thing that happened fairly early when I took over was that the decision was made to build the railway to Joondalup and so that was done on my watch too. As the CEO I didn't have that much to do with it in a 'hands on' sense. I had terrific people who took up the cudgels and did it and my job was handling the politics and that was fine.

There was a significant change required in the Railways at the time - because until electrification passengers were completely 'on the nose'. An eminent predecessor said 'this would be a wonderful railway were it not for passengers' because it regarded itself as a freight railway and that was the [activity on which] it made any money. Passengers were just a running sore especially, you know, [as] not long earlier [Sir Charles] Court had closed one of the significant lines the [Fremantle] line.

DAA      He did, didn't he?

2/09      JG      So that's how passengers were regarded. The trains were up to 80 years old. Wooden bodied stuff hauled by locomotives that spilt diesel all over the place. Horrible [equipment], 1950 vintage diesels [of various] classes. And the staff were [downtrodden, with no reason for self-respect]. They were [never told what was happening or asked their views] – it was just horrible.

[Some passengers] would just sit on the trains all day - like homeless people - and it was just really the pits. So there [had to be] a massive cultural change in the railway to get into customer service. I guess that

was one thing that I was happy that we did quite well, the cultural change, and [designing new roles for] the guards and getting the [passenger service] up. That was a good thing to do

- 2/10      DAA      Dare I [suggest] that cultural change not only occurred with the employees but it also occurred with the passengers?
- JG      Oh yes, it did. Well, once they could see that it was an attractive thing the railway, [it happened]. But we had to make the change quick-smart. It wasn't just [obvious] and now you take it for granted, you know. The trains are great.
- DAA      I love it.
- JG      The staff are good. The performance is good. I can remember being stuck on a train myself - I can remember coming in to a meeting on a Friday morning about three quarters of an hour late and abusing everybody there because I'd actually caught the train to work that day and I'd been held up at Subiaco for three quarters of an hour and the poor bloody guard was wandering up and down the train. People were saying 'what's going?' and he said 'the buggers haven't told me'. He and I had a good chat on that day. Anyway, so changing that was really important.
- The best thing I ever did was catch the train myself]. I think that was the most important thing I did in my whole career - catch the trains.
- 2/11      DAA      You sampled the goods?
- JG      Well yes.
- DAA      Alright, well, talking about staff and culture what about Midland Workshops?
- JG      Oh, well, yes that was a sorry old thing [to have to do] wasn't it?
- DAA      Well, I don't know but I always get that impression.
- JG      I think when I took over there were -its peak had been 3300 people. When I took charge, it had 1800 or 1900 people and actually it was obvious that we didn't need anything like that. So, what we did was - I



guess at the beginning of 1990 - we had a plan to make it more competitive [and] to shrink it greatly. To shape it up in terms of quality management and accounting systems. To bring it down to somewhere to around 300 people - maybe 250 - from 1800 or 1900 and possibly to sell it [with a full workload]. But, certainly, to transplant it to a different site eventually. That was a longer-term thing but we thought we could turn it into a viable organisation with a future.

DAA As an engineering workshop?

2/13 JG Yes. And so, we worked towards that. We worked and worked and worked and including, I remember, we embarked on an 84-week program to get it accredited to AS 3900 - the quality standard appropriate to workshops aligned with one of the international standards. And anyway, after a couple of years - actually the unions were against all change [saying] 'the bastards will never close this place' don't you know. 'Don't do anything, no need to reform. Nothing just stay as you are. They cannot run the railway without this joint.'

Well, in fact, [we] could - we could because there were three privately owned railways in the Pilbara all being [serviced by private sector workshops]. So, in the end - in September 1992 - we'd been through a couple of years [and] we'd recruited this [manager] two years earlier - from Newcastle he'd worked for [one of Australia's top rolling stock manufacturers]. He came and ran the Midland Workshops for two years and it was he who embarked on this quality accreditation and the program to downsize. He was a tough bastard but he had the vision and he was going to do it.

Anyway, by September after two years we decided that we weren't going to succeed. We were thwarted every step of the way in the reform [process] but there was an election due the following February so we decided that if we tried to [close] the place before the election or even looked as if we were going to [do so] then we'd be beaten

[and] it wouldn't work. [So, we procrastinated instead].

After the election [early in 1993] - that was when Richard Court got elected - about five weeks after that we wheeled up a major package of reform through our minister to the new cabinet. There were many components to it but one of them was closing the Midland Workshops and then we embarked on a nine-months, program to close it. So the incoming government gave us the nod to do it. It was early in their term so they could ride through that and it all happened.

It was a pretty major project closing the workshops, because there were quite a lot of things that were done there which were of value and there were some things - there were a few things - only a handful of things on which the railway relied and you couldn't actually get them done anywhere else. So, we actually let special contracts - [for example], we would let out a contract to a particular company on the basis that they would take over the particular machine [which we owned] that was used for 'planing' the rails [for points and crossings].<sup>2</sup> We put a small team of five people in charge of it who had excellent human skills. We ran counselling sessions [and courses on] how to [write job applications and] resumés. There was a lot of stress management [hidden in the courses] as well. They didn't realise that but we were [trying to help] them to cope [with major disruption to their lives and their families' lives].

In 1994, the padlock went on [the gate] and that was the end for the Midland Workshops. We had a voluntary severance programme [and] by the time we closed the shops we were down to about 1000, I suppose. We opened up redundancy across the entire railway so that we could provide opportunities for people at Midland to be redeployed within the railway. In the end 1350 people left the [organisation] under that program so we had an even more major downsizing than would have been caused by the closure of the shops, and there were opportunities provided elsewhere [for people who

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<sup>2</sup> Machining the surface face of the steel rails.

wanted to stay].

There were great success stories. There was some people who took a severance package and actually took a contract and went out and built a new business. There were a few quite celebrated ones but there were also some [sad stories, I'm sorry to say]. The five people we put in to manage it they did an absolutely superb job looking after the troops.

The interesting thing was that the unions - once we'd made the decisions - were nowhere to be seen. They just ran [for cover]. They could have come in and helped [their members at their time of greatest need, but in the end the people of Midland looked after the people of Midland, and they're absolute heroes in my view].

DAA      Interesting, isn't it?

2/18      JG      Yes. So, anyway, that was the story. And it was interesting that early in the piece we were - well maybe it was in about '91 - we were bidding to take iron ore from Koolyanobbing. There was a company up there what was it called - it was probably Koolyanobbing Iron. There are two companies up in that area at the moment - and I think they're both in some trouble because of the iron ore price - but this particular company had been shipping iron - they'd previously shipped iron through the BHP owned jetty at Kwinana and they didn't want to do that anymore because they were competitors and so they wanted to go down through Esperance.

Actually, the Esperance line wasn't all that good [because] the sleepers were [ancient]. The rails were good but the sleepers were [beyond it] and with our cost structure at the time we couldn't have been competitive we decided. So, actually when we bid for that contract we bid on the [assumption that] our internal cost structure [had been] reduced by the closure of the Midland Workshops. [On that basis], we got the work [and the railway is still, to this day, hauling the ore to Esperance]. We got a grant for upgrading the sleepers on the Esperance line from the federal government and we bid on the basis of a reduced cost railway organisation. We won it

and in fact the railways made quite a good income from [it].

So it was a pretty emotional sort of a time as you can understand.

DAA Oh, very stressful, yes.

JG I actually wanted to leave the Railway after that. I felt like I'd put down a sick animal and wanted to leave the [scene]. I'd been there for about five or six years.

DAA You'd 'done your dash' as they say?

2/20 JG Yes, well I figured that I'd done [that], and the thinking around at the time [was that] you shouldn't spend more than five or six years running one outfit and I subscribed to that so I thought 'well, time to move on' and that was fine.

DAA Were you involved with the National Rail Corporation at all?

JG Yes. Well that was another big story because [across] Australia there were five [government-owned] railways. We were all little fiefdoms. Standard gauge had gone through in [1969] but still the train was [WA's] trains if it was this side of Kalgoorlie and it was a New South Wales train if it was [in that state and there still wasn't] standard gauge [from Adelaide] to Melbourne. There was an organisation called Railways of Australia a committee, basically, or a secretariat in Melbourne so if you had a container on the train the only way you could really find out where it was, was to ring up Railways of Australia. It was really unsatisfactory.

You couldn't have a private company owning a train which shipped containers from Sydney to Perth. It [simply] wasn't an open railway.

[There was an awful lot of argument between the five different railways, but in the end, at a meeting of railway CEOs in Brisbane in 1988 we decided to] form a jointly owned company and [each state would] own a chunk of it to [own and] manage the Australian interstate freight. So that's what happened.

It was in about I think July 1991 that after lots and lots of negotiation,

[and] lots of brinkmanship actually. There were some torrid negotiations and literally [stand-offs] with arguments over what access prices were going to be paid for access beyond Kalgoorlie for example and this side of Kalgoorlie. There were threats made not to take part.

2/22      DAA      This is access to the tracks?

JG      Yes, the usual [elements] of a negotiation and in the end - I remember Bob [Hawke] - I remember in July '91 at it was called a Premiers' Conference. These days they're called CoAG Conferences I think.

DAA      Yes.

JG      But they were called Premiers' Conferences and there was Bob Hawke sitting on that side over there and Carmen was sitting over there - Carmen Lawrence and Nick Greiner was sitting here - and you sort of got the impression that it was Bob and Nick who ran the place. But, anyway, Carmen came [forward], well, there was this big discussion about [the] National Rail Corporation and I remember at the end of the discussion Bob said 'okay Nick?' Nick nodded, and that was it. The National Rail Corporation was then formed. It [had all been] prepared and so it went on from there.

We all knew at the time that it would struggle- that it would have trouble financially and it would become privatised [and] it would all be split up. But we also knew that Australia's railways would never ever be the same again that the whole thing would be opened up and you'd have different competitors running on the [infrastructure] and that's what happened. So that was great fun. I loved that.

DAA      Alright, well, let's have a stop there then.

JG      Okay.

3/00      DAA      Now, Jim, I feel that we've come to the end of your time with the railways?

JG      Yes, this is true.

DAA And the next step was?

JG The Water Corporation.

DAA The Water Corporation?

JG Mmm.

DAA So, you found yourself in 'cold water' or 'hot water'?

JG Well, 'no water'.

DAA No water?

JG This was the problem. But, no, I mean the funny thing was [precisely] that. I joined up in about March '95 and in about May we published a document which was most impressive - and it had been some years in the making - 'Perth Water Future' and it was a 50-year plan for Perth water supplies and it looked at supply and demand and risks and so on.

It gave the organisation quite a lot of authority. Nobody else looks ahead 50 years and [the organisation considered it to be] their responsibility to [do exactly that]. At the time, it was called the Water Authority of Western Australia - not the Water Corporation - and its role included the management of water in the environment. Under corporatisation the [organisation] became a commercial [entity] and [a new entity called the Waters and Rivers Commission] took responsibility for managing all [water-related] environmental issues.

But, anyway, there it was 'Perth Water Future a 50 Year Plan'. But what happened then was that it kept getting drier. I suppose I should say [that] before I went in there I actually asked Richard Court - who was the then Premier - what he would like me to achieve at the Water Corporation / Water Authority - and he said two things. He said 'Jim, I'd like you to drought-proof Perth and I'd like you to turn infill sewerage into a popular success' because infill sewerage had been a bit of a [problem]. Maybe it hadn't been that well handled in terms of chomping through tens of thousands of back yards and chook runs and swimming pools, and this and that. It was disruptive wherever it

passed.

DAA This is to remove the old septic tanks [and] connect up?

JG Yes, because there was this massive backlog of [work] and Richard Court's government had embarked on an ambitious and thorough [scheme] to get rid of septic tanks and [put in deep sewerage] but it was backfiring on them.

3/03 DAA Let me ask you a question then. This might sound like a silly question why would you get rid of the septic tanks?

JG Oh, well, because of environmental reasons. That was it. And there were restrictions on development so that if you had, for example, a quarter acre block then you couldn't subdivide it unless it was on deep sewerage.

DAA I understand.

JG Some people asked [and] some people challenged the whole basis of it and said actually septic tanks were much more viable and sustainable long term than the green movement would have us believe. So, there were arguments about that.

But that was the logic - to enable Perth to become denser [and] to alleviate environmental problems. There's no doubt that there were increasing nutrient flows into water bodies including the Swan River. Some that came from septic tanks, to be sure, other came from fertilisers and so on. [As it turned out, changing the infill sewerage program to make it more customer-friendly and popular was reasonably easy to do]. You just had to focus the organisation on customer service and put a lot more effort into consulting, [in order to] enthuse people internally about giving good service. That was not a difficult thing to do [because] the Water Corp was [already] bloody good at customer service in almost all respects but it just missed the ball on this [because of a rush to implement the program]. So, we fixed that.

But the drought-proofing Perth was something else. A different [and

very challenging] issue.

Anyway, so what happened then was we started - well I guess I questioned - right from jump I wasn't that keen on one aspect of Perth Water Future which was the basis that the presumption that the entire record that we had of rainfall and run off was the best indicator of what was going to happen over the next 50 years. We had records from about 1907; good records of run off. In some cases [it was] simulated because we didn't have stream gauges on all those streams in 1907 but we had stream gauges on key streams and you could impute from rainfall records and so on what the precipitation and the run off on the overall set of catchments had been. So all that was okay.

DAA      Okay so you're talking about run off into catchments into dams?

3/06      JG      Exactly, yes. And there was a reasonable simulation at least of what it would have been. But if you looked at the presumption in Perth Water Future [which] was that from 1907 up to then - which was a period of well nearly 90 years - I suppose you should take an average of that and that would become the best indicator of the future. But, in fact, what had been happening was that if you looked at the previous 20 years so from, say, the mid 1970s it was clear that there'd been a major decline in runoff and even from the mid '60s s. It was clear from the runoff graphs that there'd been a major decline at least.

Was it permanent or was it temporary one could never know and what was causing it. Climate change would in part be responsible, maybe it was different treatment of the catchments, maybe it was the demise of cool burns of the old-fashioned type of forest maintenance. There'd been a lot less cool burning taking place because of environmental and public health type interests - asthmatics type interest Doug. But anyway, so I started asking those questions.

Then another thing that kicked that along a bit was that we became a corporation and the Water Resources Division - which was a very good division part of the Water Authority - was not part of the Water



Corporation [any longer]. It became part of what was known then as the Water and Rivers Commission and later on became the Department of Water. So those in charge of looking after water and environment became part of a separate organisation.

In the end when I asked the question, of those who were left, 'well, hang on how can this be true? How can the last 70 years or whatever be the best indicator of future? Why aren't the last 20 odd years of far more significance?' And everybody ended up saying 'you're absolutely right, of course. That's the case. We couldn't agree on that while those Water Resources people were part of our organisation but to us it's obvious.' And I thought 'oh my God, what have I let myself in for here [with] all these people are agreeing with me? '

DAA      You've got 'the tiger by the tail'?

3/09      JG      I [had been] hoping they'd sort of 'hose me down.' But so anyway - so we still had the arguments - but that was it and, from then on, we started planning on a much-reduced run-off for the future. Very alarming especially with Perth population growth. Since the 1970s Perth had been expanding into ground water. The first ground water plant was at Mirrabooka in 1968. Up till then it had been purely [dams]. Nothing else and then we'd gone much more deeply into ground water and so we expanded that.

We built three new dams actually. We built the Harvey Dam and then we built two other pipe head or pump back dams. We opened the Harvey Dam in 2001 and that allowed us to use Stirling Dam. It was substitution. Stirling [had] very high quality water not far from Collie - it had been used for irrigation purposes but it was of such [good quality]. Harvey Dam which we built collected water of lower quality [because there] was agricultural land around [it] but it allowed us to give that water to the irrigation farmers and take the Stirling Dam water for [Perth]. Anyway, we did all those things but then in 2001 we had the worst winter in living memory. I think we got three gegalitres. We'd been getting 338 gegalitres a year on average into the dams.

That's if you looked at the entire record - that's what we could expect - and suddenly we got a year with [only] three billion litres into the dams.

DAA You wouldn't even cover evaporation, would you?

3/11 JG No. Well that was probably already netted off but that was what we got and this was 'oh my God, where do you go from here?'  
Fortunately, ground water it's a good insurance policy because you can pump beyond a sustainable rate for a period and it's not irresponsible to do so provided [you manage it].

DAA There's a sort of an inertia there?

JG Yes, provided you [have] plans to allow it to recover naturally and by [using] other sources it's a good insurance policy and [we] availed ourselves of that. But then we also did a lot of scenario analysis you know, 'what happens if the [current low] rainfall continues?' At any one time from 2001, we would have three different scenarios and one of them would be the old scenario - the old rate of [rainfall], one would be a continuation of what we had at present - the new low level - and the third would be lower [or] even worse. And the problem was that for the next seven or eight years the worst one always [turned out to be] the correct one. And it kept going down and down and down. I mean and if you look at last year you know - it was actually worse than 2001. It's just been steadily 'heading south' the runoff. Just appalling. I mean you wouldn't build the dams today.

DAA No.

3/13 JG You'd just go for ground water and desalination and recycling. But anyway, so we did this. We continually did the scenario analysis and we would have the 'black hat scenario' and it was always the one that came true but we always we had [some options]. It was always difficult to get new sources approved from an environmental or political point of view and so we would always go for two. We would always have two up our sleeve that we were developing fully just for

the extra confidence.

And I remember it was the third week of July in 2001 that we realised that was it. We were [realising] that was all the rain, three million litres [we were going to get that year]. That was all we were going to get - about one percent of traditional [flows] and then we decided well we had to have [an alternative]. We did our forward planning and we looked at what was in the dams and looked at what we could reasonably take from ground water and decided. We also looked at Perth customers - the habits - and the problem is that we actually hadn't had a total sprinkler ban since 1977/78 so the sin we as an organisation had committed was sort of letting our customers - our populace - fall out of the habit of having total sprinkler bans.

You know, up until 1978 they were quite a frequent occurrence. In fact, in the '50s and '60s they would happen because of not lack of water but lack of capacity in reservoirs and lack of pipe capacity and this kind of stuff. But now the whole populace and the media was very critical and we'd be accused of lack of planning and all this sort of stuff even though the plans were pretty damned respectable.

So, we decided we had to have two new sources. We decided in about August of that year that we had to have two new sources capable of being brought on stream within 24 months of making the decision that they should go on stream. It didn't mean that we [necessarily would need them] - because you didn't know when you're in the middle of it - you didn't know whether 2001 was a total anomaly and whether it was all going to bounce back or whether it was the start of a new line on the graph. And so, you'd wait for a while to see how next year started to unfold before you actually made the decision and hit the button on [the alternative sources]. Anyway, what we did was we came up with [two options]. We wanted two new sources of 30 gigalitres or 30 billion litres each and one of them was more ground water.

I remember going into my deputy's office and in August of that year

and he said to me 'Jim, well, look we've decided that one of them is ground water and the other is desalination'. And he said 'and you know Perth Water Future had put desalination out beyond [2050]' on the grounds of cost and energy and [technological risk]. It was [right] out there with towing icebergs and increasing the number of rainwater tanks in the community in terms of economics and feasibility and that kind of [consideration]. It was just out there.

But what had happened actually it was interesting that in about maybe early '99 - or maybe it was '98 - I'd hired a new commercial person and he'd taken it upon himself - he was an engineer with an MBA - and he'd taken it upon himself to do a study of the possible role of desalination in the Western Australian water supply. We'd done some [staff] swaps with a Scottish desal company and in 2000 we actually wrote a report about desalination for the future prospects of Western Australia and the then Minister who was Kim Hames - his picture's in it.

We'd actually done [it] without really taking it all that seriously I suppose. We'd thought it was our responsibility to actually suss it out to see what this technology would offer. Partly because of the remoteness of areas of Western Australia and possibly it was a realistic proposition for the more remote areas. I mean, for example, [the iron ore company which was running Robe River in the 1960s and 1970s] - they had a desalination plant there which was mechanical vapour compression. We ourselves - the Water Corporation - had a reverse osmosis unit at Denham / Shark Bay and if you went back to 1896 out there in the Goldfields they had condensers [which were a boiling and condensing arrangement], and they cut down trees and railed them in [for boiler fuel].

DAA I know, yes.

3/18 JG So [that] was distillation and mechanical vapour compression is just another evaporative method. So, you know, therefore, it was likely to have a future. Anyway, but we never thought it would happen. It was

[simply] an option for Perth. But anyway, so there we were in late August '01 agreeing [to] that.

We would now develop plans to come up with desalination as an option and by the middle of the following year we had developed a plan and selected a site for desalination and we had gone to the international market place and we'd selected two consortia. Both of them had French technology providers for desal companies that had been active in the Middle East and Spain and so on. And both, of course, had Australian civil engineering partners and control engineering partners and [such like]. So, by the middle of 2002 we had their bids 'in the bag' and part of the deal [when] going to the market [had been] 'oh, and by the way. we're not necessarily [going] to let a contract immediately [it depends on what the climate does]'. We paid them for [preparing] their bids because they were incurring costs and weren't necessarily going [to build the plant].

DAA And you wanted the information?

3/20 JG We wanted the information. Yes, [and] because water supply is so critical to our community we wanted to get the design-and-tendering phase behind us. It was all done on an alliance basis. We got to that point and we kept the politicians [and the public] informed but we can come back to that.

But in the end - that was mid '02 - we just had to keep our eye on the weather. I mentioned we had looked also at an expansion of ground water by 30 gegalitres and we had decided by the end of 2001 that 30 gegalitres wasn't actually realistic environmentally. We couldn't do it responsibly and sustainably, but [a project half that size] we could do. So, we went ahead immediately and [got] the 15 gegalitres of extra ground water.

So that was underway but then from middle of '02 to the middle of '04 we kept our eye on the weather and in the middle of '04 I remember briefing Geoff Gallop on the situation and we reached the conclusion that we had to go ahead with the desalination plant at

Kwinana. We were ready for it. We'd shortlisted, we had environmental approvals in the bag, we'd actually gone and actually expanded the capacity of the proposed plant up by 50% so it was now 45 billion litres a year and it was hot to trot. And so, we let the contract and away it went and it was duly delivered within the 24 months that we [had planned for] and the alliance contracting [worked brilliantly]. Water Corp's very good at that. Harold Clough brought it into the state. Sue Murphy chaired that alliance board and she chaired the one for the second desal plant as well. She did a great job and the whole thing was very successful. But it was always terribly unpopular you know. The press doubted it, they pilloried us. I remember Paul Murray the then editor of the West saying that desalination was a knee-jerk reaction to cater for the complete lack of planning. Even though I briefed him on Perth Water Future and all these [issues] - briefed him personally - he still came out with these lines. They're lazy so and sos.

DAA It's lazy journalism, isn't it?

JG Oh, they're all [under pressure]. You've got to look at their jobs and what they've got [to do]. You almost feel sorry for them what they've got to produce in a day - and once they've written it they're not answering any questions [because] they're into the next one, you know. Anyway, so that's the reality of it. Where did we get to?

3/23 DAA Well, you basically were moving on the first desal plant then, weren't you?

JG Yes. That's right and that's what happened. And then because it was so unpopular and it was the media was really into it they wanted to..... you know something, we actually excluded the media entirely from the site. It was a totally secure site. I didn't go down to it myself. I wouldn't go to this site myself. I was [dying] to get down and have a look at but I decided that I would not go and see it until it was finished. And the reason for that was that then I knew that I could then say to others 'I'm not going to look at this. I know the

troops are getting on with it. They're doing really well at it.'

It was a completely unionised site the unions had their offices on the site and that was fine - relations were good. At the same time, Alannah MacTiernan's railway to Mandurah was being built and the unions had turned it into an art form. It had very high public profile. And I thought that if we gave [our project] any profile then it would suffer the same fate. So that's why I said 'no, I'm not going'.

The funny thing was that I remember Geoff Gallop rang me up on my mobile - I was in the car - and he said 'hey Jim, can I take Bob Carr' (then Premier of New South Wales) 'down to look at the desal plant?' And I'm sitting there thinking oh hell this could be a career limiting decision. I said to him 'Geoff, no, and the reason is this, Geoff, we've given it zero profile. The West and everybody else is clamouring to get into it. It's a [model] of industrial peace at the moment, unlike your railway, and I don't want to give the place any profile whatsoever. I have a commitment to you to deliver this thing on time, on budget, and pumping out water by the summer of [2006/07] and I'm going to deliver on that, Geoff, but I think if you and I start giving it any kind of profile then I cannot promise that. Okay?' He said 'oh, fair enough Jim'. That was it!

DAA Well he was he was very decent about it, wasn't he?

JG That was interesting. He was great. Well see I'd deliberately kept [it low profile]. Our Minister at the time wasn't a tower of strength in Cabinet and I'd decided that this thing it had to have the first-up support of the Premier.

DAA Absolutely.

JG So, we went to great lengths to win the Premier's involvement. I actually had people [working] in the Premier's office at one stage - and so we helped the Premier lead the thing. In the end, he actually made himself the Minister for Water, as well. As Premier he took over the role.

3/26 DAA Well he knew when he was on a winner then?

JG Well, yes, that's right. Well, he trusted us. Interestingly he had a son who was also in the water game in the private sector. A recent graduate so he was had all sorts of interest in it but he was basically a politician and knew that the public was very concerned about it and he could see that we had a plan to get Perth out of it and it sounded highly credible and so we helped him to lead, basically. We helped him to lead and so that went extremely well.

It was a bit tragic that Geoff - it was the beginning of '06 I suppose - that he ceased to be our Premier because he was [suffering from depression].

DAA He was very brave, wasn't he?

3/27 JG He was very courageous and the thing is that he had great intellectual courage and he had the respect - unquestioning respect - of every member of his cabinet. They weren't necessarily in the same faction, or whatever, but they undoubtedly respected him and when Geoff was supporting desalination he got no challenge from his cabinet members. I mean I think they knew - we briefed a lot of the others as well - they knew where we were coming [from]. We briefed the Opposition and we told the government we were doing that, so we were totally open about the whole thing. We briefed the press time and again but we didn't let them near the place. We didn't let anyone near the place and so all that was good.

DAA So just summarising that 'quarantining' for the want of a better word the desal plant you actually gave no leverage to anybody who wanted to apply pressure to you?

3/28 JG That's right, yes. And we told them why we were excluding them. We said - Perth Water [Future] - have you looked at what's happening to the climate lately? We have to produce this [desalination plant - there is no other choice] and therefore we're keeping everybody out of it and that means me too. Sorry, I haven't been to the place - I'm not



going to the place. I can tell you it's on time and it's on budget and it will be cranking out water by [the summer of 2006 / 2007].

DAA And was it?

JG It was, yes.

DAA Good, alright.

JG Alan Carpenter was, by then, the Premier and in November 2006 he found himself in front of a whole bunch of TV cameras down at Kwinana drinking the first glass of water out of this thing.

DAA Yes, I remember that.

We'll just stop there Jim.

4/00 DAA So, you've got the first desalination plant running and Alan Carpenter's drunk the first nominal glass of pure water?

JG Yes, that's right.

DAA There was then a second desalination plant was there not?

What was the story there?

JG Well, well that was interesting. Basically, it was it was [keeping on with our] scenario analysis you know. The first plant was terrific because it was on time and on budget and it actually delivered to its nameplate design, [right] on time. I was worried that it might have been one of these technologies that goes through a few years of teething before it produces [the full output] but, no, it was an established [success]. It was terrific.

DAA And what was that [it produced] - what did you say - 45 gigalitres?

JG 45 gigs. It actually produced initially - and probably still today - a bit more than its nameplate design. More like 50. So, it's been terrific.

DAA So, the second one?

4/01 JG Well we were, of course, doing our scenario analysis - and doing this and that - and we weren't going to build a second one at all. Our intention was to build South West Yarragadee which was a big aquifer

under the Margaret River [region down beyond] the Blackwood River. The whole thing down there it's a rift valley. The Darling Escarpment continues all the way down to the Southern Ocean, effectively - and that's a long way inland - and then out to the west you've got Cape Naturaliste and Cape Leeuwin and that actually sits on top of a granite ridge and it's topped by limestone. Hence, you've got those lovely caves down there, and so on.

But that's a granite ridge and in between that and the Darling Escarpment there's actually a rift valley [where] the earth has sunk by maybe 15 kilometres. I don't know - I'm not a geologist - but it's sunk a long, long way. And the trench in between has filled up with sand and sediments and it's a brilliant set of aquifers down there. It's actually overlain in a lot of places by clay and you've got forests growing on them. But underneath there's [an aquifer material] - can you imagine - like pure white ball bearings. It's like that. Highly transmissive [with] great volumes of water in there. Great quality of water. And what happens is that the precipitation that falls on that country goes in to the [aquifer] - soaks in, and then it actually can't get out through the granite ridge to the west. It has to go out into the ocean via Geographe Bay and the Southern Ocean east of Augusta so that's where it goes.

And so, you've got this massive amount of water down there which actually bleeds out into the ocean to the north and south of that area. The aquifer is South West Yarragadee - it's actually part of the Yarragadee aquifer - [which extends well to the] north of Perth. It is quite large volume [of] drinking water. It's generally 700 metres or more down. So, when we proved it up we were always going to build that instead of a second desal plant. And we proved it up - we actually spent \$25,000,000. We even sunk one bore which was a pilot bore and did pump testing on it and it was going to become a production bore in the [final] scheme of things and we got environmental approval. We even had a compliment from the EPA they said 'this is the best and

most thorough submission we've ever received'.

But somehow politically things [went off track] - there's a lot of retired professors and people down there and people who don't want anything in their back yard whether it be tin mines, coal mines, water exploiters, whatever. You see you could take out 90 billion litres a year out of that with almost zero effect – on the superficial environment because of the clay cap. All you would do is reduce the volume flowing into the Southern Ocean and into Geographe Bay by an equivalent quantity. So, a terrific resource really with almost no environmental cost. And you could monitor just by simple bores. You can monitor what's going on environmentally way below the surface. Brilliant.

Anyway, it became all too hard and I think our politicians left the decision too late. Maybe we left it too late as well but anyway 'all the mob' down there got their act together and they staged a rally up at Parliament House in maybe February 2007 and that was pretty scary for the politicians - Alan Carpenter was a relatively recent Premier at that stage.

And the other thing - the final nail in the coffin of South West Yarragadee - was the success and popularity finally of the first desalination plant because what happened was that - as I say - Carpenter was drinking this first glass of water in November '06 - from the beginning of that year the eastern states had dried out. Melbourne had cricket fields and so on which were just dry as chips and they were really in a terrible condition.

They actually hadn't done their planning particularly well. There are reasons for that. One of the reasons is that it's all fragmented over east. The three eastern-most states it's all done on a basis of regional bodies. They might be agglomerations of local government areas but it's all split up geographically. There is no such thing as an overarching state monopoly, an old fashioned 19<sup>th</sup> century monopoly. They only exist in Western Australia and to an extent in South

Australia and Northern Territory. So, they don't have an influential body like the Water Corporation. They have a whole bunch of different ones and other departments of government such as the equivalent of the environmental regulators they actually cover the whole state so they have far more power than these fragmented utilities. So, they didn't have any of that long-term planning [and state-wide customer commitment] that we had.

Anyway, in November '06 when Carpenter drank his glass of water the skies were [suddenly] filled with aeroplanes [full] of politicians from the eastern states slapping our guys on the back and saying 'hey, that looks pretty good - how do you build one of those in 24 months - that's great can we have one too?' And in the end Sydney built one about three times the size of ours, Melbourne built one about the same size as theirs. Gold Coast built one, Adelaide built on. None of them has been used very much since they built them. Most of them have been just lying idle most of the time because they didn't do the scenario planning business [as well and as comprehensively as we were able to].

But - anyway - with our 'pollies' now feeling pretty good about it. With all these 'nimby' types coming up from the south west, I can remember one day - whenever it was, early '07 - Carpenter called me up to his office I thought 'this is good, we're going to get the go ahead for South West Yarragadee' [but then I thought a bit more and] said to an assistant in the office 'give me those other papers as well'. {These were the ones] about the desal plant. So I walked into the room sat in the room waited for Carpenter and he finally walked in and he said 'Jim, I just want to let you know that we really appreciate everything you're doing at the Water Corporation' and I thought to myself immediately 'oh [hell], I'm glad I bought up that other set of papers'.

DAA Yes, this sounds like a poisoned chalice?

JG Yes. So that's what happened and we ended up with the second desal plant.

DAA So, he basically said 'no go' for the Yarragadee but 'desal yes'?

4/09 JG Yes, and the second desal plant was done on the basis of it being 50 billion litres but we let the contract on the basis that it could be doubled. Before we'd finished the first stage - I'd left by then - I mean my job I figured was the Perth water problem and as long as we got approval for the second plant that was my job done. The rest you know. Sue Murphy and others could do that much more competently than I. So, I left then.

But then within [about] a year of my leaving they'd decided to go ahead with the second stage of 'Desal 2' and the rest is history. So that's all pretty good.

A pity about South West Yarragadee. It's still there as a wonderful resource.

DAA It's still there though? On the issue of - I mean, obviously - the South West Yarragadee's got environmental issues and political ones?

JG Well it, sort of, almost hasn't, Doug.

DAA Well, yes, but I mean that's the perception?

JG Mmm.

DAA But with regards to the desal plant there are environmental issues there, are there not?

4/10 JG Well, they're pretty minor though. The trouble is that with environmental issues it's easy to whip them up. There's a danger in society that we underplay environmental issues but there's also a grave danger that we overplay them. The water desalination plant obviously sucks in water - half of it goes out into the system as drinking water and the other half goes back into the ocean taking the entire salt load.

Therefore, what you're squirting back into the ocean is a volume of water which is twice as salty as sea water and all you've got to do is properly design the diffuser. A diffuser's just a long big pipe that sits

on the bottom of the ocean with nozzles pointing outwards to left and right at 45 degrees which just squirts water back up at the ocean surface and it sort of tumbles [the water around] and 100 metres away from the diffuser you cannot spot the difference. Regardless of what test you do you won't pick up. It gets diluted. There are ocean currents going past, you know. It's just nothing.

Anything else, such as flocculation chemicals that you might have added to remove organic material or stuff from the incoming sea water, all that is precipitated out before you discharge the salty water and that's all disposed of in other ways. So, there's no damage at all. People worry about sucking water in and you know the effect of taking that water on fish breeding but as you can imagine, without trying to trivialise it, it really is a drop in the ocean.

Therefore, the only environmental effect about which one ought to fret is the fact that it uses energy and [these days] the energy it uses is [low]. The energy efficiency of reverse osmosis has improved out of sight over the last 20 or 30 years. It really is quite extraordinarily efficient. And, of course, Water Corp for its first plant wrote a contract with a wind farm provider so via the grid that quantum of electricity is provided for and you can do that sort of thing [with renewables]. You should worry about the energy aspects of it - there's no doubt about that - but [that's because] you should worry about energy consumption of all aspects of society.

DAA Yes, so just on the matter of the desalination plant I think what you're implying is that if you can use green energy - or clean energy - then, obviously, the environmental equation is a lot better?

4/13 JG Well, yes. My view Doug is that we use too much water. I think we use too much energy. I think our impact on the [planet] - I think seven billion people is too many - so I've got a few views about that sort of thing. I think we should use less water. We had a regulator back then who said who suggested that the government should not ramp up the price of water to cover the level of cost of desalinated

water. I didn't agree with that at all. I thought that was ridiculous. I mean if a cyclone goes through and wipes out the Queensland banana crop guess what happens to the price of bananas? We've had a climate impact [on] such a critical resource of water - it's not going to wipe us out as a community - but let's get real about it and let's start paying the true cost of [water in the long term].

DAA We're to reallocate resources, aren't we?

JG Yes, so I think we - I passionately believe - we use too much resource in our society and that includes water. But, in a democracy, it wasn't really my job to make those arguments. I would say them in the right places but I'm hardly going to wage a campaign. It's my job to supply the water [and] that's it.

In the Water Corp we actually did a huge amount of 'water wise' advertising. to persuade the community to adapt to use less water and to, or to, use it more efficiently.

You [have to be trusted] as a responsible organisation [which] has a complete set of plans for dealing with what may arise. It was terribly important for us to retain leadership of the entire water debate.

DAA But the point is at least to have the debate?

JG Oh yes, you've got to have that. I mean it's a game, isn't it?

4/15 DAA Alright. You talk about 'water wise'. This was a program to reduce the consumption or waste of water then?

JG Well to use water more efficiently and to need less water as a society.

DAA Yes, use it more efficiently?

JG All that sort of stuff and we tackled that on many, many, many fronts.

DAA How much did you save?

JG Well the whole idea was to save - I think our target was to save 15 gegalitres a year back in [2001] and we saved that quite easily. You see we could have got tougher - you could save more - you could crank the prices up. You've got to maintain [support and] it was

politically not acceptable to raise the prices to that extent so we ran public [communications] campaigns.

There was a lot of work done on all those things because you actually have to do a fair bit of market research to see how the community's thinking and see how you can motivate them to change and it's not the same next year as it was this year or last year you know. Market research is an amazingly complicated and powerful thing and it's amazing what these bloody marketeers [can do to influence] the community psyche.

DAA I used to be a marketing manager.

JG Yes, well, there you are you see, you know. I don't know [but] I just sort of sit back and I do appreciate it. I understand. I wouldn't know how the hell to do it but I was certainly convinced that we had to retain the leadership [in the public eye]. And then there was, you know, the whole [issue of] if you're on the nose politically then you're [dead] as an organisation [because] you don't have any influence at all. Water Corp was always very good at customer service and we kept on reinforcing that. When I came into the place I was amazed at their customer service attitude. There was a definite ethos there and it was actually so important in terms of credibility. Anyway, all good fun.

DAA Alright. Can we move on to the topic of waste water?

JG Oh yes, sure.

DAA Or waste water treatment?

JG Yes.

DAA Was that an issue in your day?

JG Certainly was, yes.

DAA How did you get involved with that?

JG I suppose there are a bunch of different aspects to that Doug. One is the infill sewerage program, of course, which I've mentioned.



DAA I suppose that captures the waste water, doesn't it?

JG No. Really, no.

DAA No?

4/18 JG Not entirely. It was an important [aspect] of it. I mean another part of it was, well, odour - odour from waste water plants. Another aspect of it is recycling [and] the importance of that. Another aspect of it was waste water accidents - spills into rivers.

So, it's a fairly multifaceted [set of issues]. And another aspect of it is the degree to which you treat the stuff, and where you put it, and what you do with the solids and [so on].

DAA We're talking sewage treatment, really, aren't we?

JG Yes. Yes, sewage collection, conveyance and treatment. And then, of course, there's storm water as well - what you do with that.

DAA And what do you do with storm water?

JG Well in the old-fashioned cities of course it was combined with the sewage but here most storm water off this building it's probably going into soak wells around this block because we're so lucky in Perth we just sit on sand.

DAA So, it goes into the ground?

4/19 JG Yes, and the council [storm water] will be going into sumps or it'll be going into trunk storm water drains. Down at Elizabeth Quay there's a [drain] - if you look at that double-barrelled drain down there - which just continually drains into the Swan River. It comes from Lake Monger actually. Those places up near the freeway [drain] into Herdsman Lake. From Herdsman Lake, there's a drain that goes out at Swanbourne. I don't know how far it goes out maybe 100 metres.

So, Water Corp does a fair bit of it but an awful lot of it is done by local government and a lot of it's done just by households. So that all works reasonably well. With sewage [the big new development] is the ground water reinjection. That is something we kicked off

probably in about 2002 and we decided it was going to be a 12-year program and we'd do heavy consultation and we'd involve all sorts of health and scientific regulators and so on. In the east<sup>3</sup> it had been a bit of a disaster. Just hadn't worked there - hadn't been enough consultation, the community was off side. But here we went about it in a different way and it seems to have gone really well and now there's a plant operating up around Ocean Reef that area.

DAA Yes. I live in the area.

JG Yes, so that's pretty good. That's a good story. And eventually you could recycle more of it. It is not unlimited of course because the amount of waste water available is not unlimited but it's a good program to get into. I think it's cheaper than desalination of sea water and it's a good thing to be recycling as a principle.

DAA So, the waste water is treated and injected back into the aquifer?

JG It is.

4/21 DAA And then it's obviously stays in there for a while and it eventually [will] be removed?

JG A decade [or] two or three sometimes. And it's very heavily treated on the way in. The process is akin to desalination and on the way out it's equally heavily treated so it's [very] safe from the consumer point of view.

DAA Alright. Okay. Well I mean in very simple terms I think water both nationally and internationally is turning into a major resource issue, isn't it?

4/22 JG I think so. You've got - we've got - climate change [in other places] like the western part of the United States - south western United States - is in a pretty threatening sort of a situation. [In] a lot of snow-melt fed [water sources, mountainous areas, like the Rockies which feed the Colorado River] you've got different rainfall patterns and snow melting earlier than it should. And you've got cities up and

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<sup>3</sup> This reference is to the eastern states of Australia

down the Colorado for example claiming their rightful water entitlements [which they've never before needed, at least not their full entitlements]. You've got irrigators downstream under threat.

In Europe [in general] there's [not] that much of a problem. They're heavily into water treatment and they're very good at treating water but and then you've got, of course, Asia [where there are] some serious battles [being] waged [over rivers and dams and who's entitled to what].

DAA I always think that in Asia agriculture is water intensive?

JG Oh, very much so, yes.

DAA Is it?

JG Oh yes, it is.

DAA You see images of paddy fields and that sort of thing and it looks like water everywhere?

4/23 JG It is, yes. Very water intensive but and also there's a fair bit of demand for hydroelectric use of water. And then you've got international water issues. That's the problem isn't it because one country with the mountains will take the water that used to flow out of the mountains down through another country.

DAA Well the Indians will tell you all about that, won't they?

JG Yes, that's right and the Vietnamese will tell you about it as well.

DAA I bet they will, yes.

JG And then you've got demand for water courses for navigation and so you end up with clearing of rapids and changed river flows and it's just amazing. It goes on forever.

DAA Well fortunately we don't have those issues here in WA.

JG No, we don't. No, that's right.

4/24 DAA So, the Water Corporation administers a large network of water distribution and water collection then?

JG It does. Yes, that's right.

DAA Okay, and obviously as far as I know at least it's also involved in irrigation?

JG Well, well it is in that it owns irrigation water sources and it's tended to farm out the channels and the operation of them to different cooperatives - grower cooperatives. That's what's happened and that's pretty well been taken over now down at Harvey and Waroona and Ferguson Valley and then up at the Ord and Carnarvon it's all that model what's generally been adopted. Which is a good thing to do. You know, let the growers fight about their own water.

4/25 DAA I suppose water quality's an issue, though, is it?

JG What for irrigation and [such like]?

DAA Yes.

JG It is. Yes, it is.

DAA I mean, I'm an electrical engineer so forgive me but to me if you provide water with salt in it for irrigation and the water then evaporates [then it] leaves the salt behind?

JG That's right. It leaves the salt behind, yes.

DAA So how do you manage that?

JG Well, I think for a start you're careful about how much water you apply. So, you don't flood irrigate you spray irrigate and so on. I don't know that there really are answers to it. If you look at those irrigation areas - if you drive to Bunbury for example - and you've got those vast areas under spray irrigation - they'll spray [and] they'll reticulate from sprinklers three times a day. A huge amount of evaporation and, yes, they get salt on the surface. I don't know that there is an answer to it at this stage.

You could say that Perth has survived - Perth market gardeners have done okay over the years - because Perth's expanded and moved the market gardeners on so just as the soil was getting to the 'too salty'

stage the growers have been paid a heap of money for their land for urban subdivision and they've gone and bought some more land further out. So, expansion makes it sustainable for the period of the expansion.

DAA I suppose there's some truth in that but one does wonder whether you could find yourself in a situation where you'd be treating the irrigation water?

JG Desalinating? Yes. It'd be very, very expensive

DAA Wouldn't it, yes, and that comes really to the nub of it doesn't it not only the availability of the resource but the cost?

JG Oh, it does yes. Very much so.

4/27 DAA Yes. Alright well I think we've come to a point Jim where it would be good to stop for today.

JG Alright.

DAA We've just about covered the issues with the Water Corporation and the resources. So, I think that's a good point to stop and then another day we'll go on to the other issues.

JG Okay, what have you got for the other issues there Doug?

DAA Well if we stop now then I'll do a review with you.

5/00 DAA Right Jim, now, obviously from the discussion we've had you have had a fair bit of interaction with the community and influencing, I suppose, to some extent public opinion?

JG Mmm.

DAA What's your philosophy on that?

JG Well, I think it's exceedingly important - it's an important aspect of leadership - interacting with the community and I think that you [have] got to do it yourself and you've got to breed an organisation which thinks that way. You can never relinquish the initiative. You can never hand the initiative over to somebody else. There are all

sorts of bureaucratic and political power brokers who want you to shut up - and your organisation to pipe down - and they want to set the agendas and set public opinion and that kind of thing. If you're leading an organisation you can never ever let that happen. You've got to accommodate them to some extent but you have to have the ability to speak and you actually have to breed staff and leadership within because if you don't do that then when you finally take off then the organisation is very, very vulnerable. So, you have to put a huge amount of emphasis on interacting with the community but also all sort of identified stake holders.

I mentioned earlier about customer service and the image for example of the Water Corporation and it was just terribly important. I don't know it's such a big field. We used to make sure that the customers were happy and if they weren't happy then they knew who to ring and it was usually us. In other words, we'd try and field the calls and people in our regions part of their mandate was to keep in touch with local politicians, local members of parliament, and local councils and even more importantly keep in touch with their key staff - the people who answered the phones - so that everybody knew what was happening why we were doing it and who you could talk to.

There was a friendly face there and then there were other aspects like customer service. If you would ring the Water Corporation, then, and say 'there's a pipe burst out the front of the place' or 'there seems to be a sewer overflow or something down the road' or something like that. Our people would always give you whatever feedback they could like hopefully tell you why it was and how long it was going to last but otherwise they'd say 'we'll have somebody there within two hours' and then the person would be there within 20 minutes'.

We actually tried to always outperform and we tried to make it so that nobody ever had reason to bear a grudge against the Water Corp. In some ways, you can do that when you're a monopoly. You could be cynical and say all you've got to do is charge a bit more and that

allows you to provide the extra service - and to an extent that's true - but the public really does expect top performance from the outfit that's providing their drinking water. And so, there was no excuse for lousy service and that was just such a terribly high priority of the Water Corporation and it always was.

I don't take credit for that. When I joined the place I'd had to bump up the customer attitude of the railway - the Perth passenger railway - to match the smart new electric trains as distinct from the always delayed, hopeless old, wooden bodied, diesel hauled ones. When I joined the Water Corporation I was amazed at how good they were already and to the extent that there was a chap Colin Temby who was in charge of all the operations around the state. His division would normally have been known as the Operations Division but in fact he called it the Customer Service Division which I thought was audacious and unreasonable but very quickly I understood why. He'd wanted to motivate the whole outfit towards customer service and put his people in the position of the customers and so that they'd be treated as our people would expect to be treated - this kind of thing.

It was an ethos that was terribly strong especially as the going got tough and we were questioned. There were questions as to our competence in water planning and all that sort of stuff. Customer service was just so bloody important. That's why in a way when Richard Court said 'just sort out the infill sewerage thing; make it into a popular success' it wasn't difficult at all because the organisation - most of the organisation - was already terrific at customer service and all we had to do was transplant that ethos into [the new project]. You see, infill sewerage was all done not by our own staff but by consultants and contractors and I think it hadn't occurred to people to actually transfer [and] infuse our ethos into those people. It wasn't difficult. It happened and contractors and consultants were delighted to do it.

DAA I notice you use the word 'customer' rather than 'consumer'?

- JG That's right. You could use the word 'rate-payers' if you wanted to and in the old-fashioned world that's what they'd be. You could almost [see them as] your victims but that wasn't the way.
- 5/06 DAA 'Customer' has got a different implication?
- JG It does, yes. I always thought it was terribly important. Then there was the business of stake-holders and there were some stake-holders who were unbelievably important to us like for example when we had to improve - especially when water got short. We had to get the irrigation industry absolutely on side. We had to turn them into 'number one advocates' and so we ran seminars and we did all sorts. We had people specially appointed to help - Total Eden and Stirling Irrigation - all these people out there had to bring them onside and have them contributing to the solution and this kind of thing.
- Then you'd go to Waldecks Nurseries or whatever and there'd be 'Water Wise' sections there. [They] were all created by our people in the interaction with the industries and they saw it as an avenue for a new business angle anyway. But if you hadn't actually taken it up with them they wouldn't have [been supportive and] we might have been the 'bad bastards'.
- And there were the other things. One way of getting to people is actually through children you know. If my grandchildren come and give me a hard time about running the bloody sprinklers at the wrong time of the day or for too long or 'why have you got that sort of grass planted there, Papa Jim?' I'll actually start taking notice of that. So, we got to the whole community through the primary schools and had a big schools program and we had all these 'Water Wise accredited' primary schools.
- DAA Well, I suppose the primary school children are the adults of the future, aren't they?
- JG They are, but they'll also influence mums and dads and grandparents.
- DAA Yes, yes.



5/08 JG So, you know, they keep you honest.

DAA Don't they ever.

JG And so, all those things were terribly important. Then you'd have certain people who were enemies or who were against you and as I said earlier they're the people to whom you stay extremely close. You actually have to engage, engage, engage I think. And remember that people never stab you in the front. Stuff like that.

So that's how we motivated ourselves as an organisation - and the regulators - it helps you in relationships with politicians. So, look, I just think the whole thing is unbelievably important. It almost sits alongside industrial safety in that respect.

Nobody will ever criticise you for going berserk for being a million percent obsessed about employee safety. It's an area in which you can be as obsessed as you like and you'll never get taken down for it and it pays off in all sorts of other ways.

DAA Mmm.

5/09 JG You can't have a great safety record unless a whole bunch of other things are being managed well and they will result in all sorts of non-safety benefits as well – morale, efficiency, everything. I guess that was my attitude.

I remember one time we had [begun to have highly publicised] sewer spillages. [Really our performance was pretty good]. Sydney would have two or three [spills] a day [and] you could see it - they put it on their website. But at one stage we were starting to have a few.

We actually set up an Asset Management Division, which we'd never had before, because we realised our assets [were getting older and less reliable]. We'd thrived for about 50 years on brand new assets and now they weren't new anymore. We actually turned asset management into a special thing. But I remember once we had a few spillages into the Swan River maybe two or three and I remember talking to my deputy having a discussion - I had this [wonderful]

deputy, Gary Meinck - we were talking about how much we would pay to not have an adverse headline after a sewage spill - an adverse front page in the West. And he said he thought it was about \$1,000,000 worth - \$1,000,000 and I disagreed with him I said 'no, I think it's I would put it at \$10,000,000. I'd pay \$10,000,000 not to have an adverse [report] because you get three [of those] and then the organisation's [on the nose] for a long, long time. You are on the nose and everybody will just beat you down time and again.

Look at Western Power I always used to say. And so remember one time the river spillages were few and far between and not causing any environmental damage really because it's almost the old 'drop in the ocean' thing you know. [But the media and the public and the regulators wouldn't buy that]. And we'd cleaned it up so much, and [now] infill sewerage was doing some more.

[So, to lift our performance to a higher level] we spent a huge amount of money on the 'River Wise' program. We put in all sorts of underground tanks at sewer pump stations near the river. We installed telemetry and we had standby power generation for blackouts and this sort of stuff. We spent a massive amount of money just to clean up our act that extra bit and that was more about trust and credibility than about the environment.

We knew in the eyes of the public it was the right thing for us to do I think to be a non-spilling sewer provider. We knew that [from a strictly scientific point of view it could be criticised as being] 'over the top' but we equally knew that if we let our credibility suffer by not lining up with public expectations then we as an organisation would be on the nose and that'd [have to] be fixed. So that kind of thing was pretty important.

DAA Well, of course, that's really the environmental issue isn't it and clearly managing the waste water and sewerage is not only important but it's also any shortcomings are visible, aren't they?

JG Oh yes, they are. And if you don't have any - see Sydney has three a day and we had none so, therefore, when we do have one it's front page news.

DAA Yes, of course

JG If you had them all the time it probably wouldn't be news at all.

DAA No. Which is a tragedy in its own right?

5/13 JG Well that's right, yes. So that's so I guess in terms of the community. The only other thing I would say in terms of the community is the leader himself. It's quite interesting really, I guess. Don Aitken once said to me that it was important to have a profile outside the organisation and so he was - things like he was in Rotary and he was the Chancellor of UWA and he was prominent in society - so I always thought that was actually a pretty good sort of advice. So that's why I did quite a few things and I ended up President of the Institute of Company Directors, or chairman of [Engineers Australia], and in the end I was on the senate of UWA and ended up Chancellor at Curtin. But to have a high profile - a respected community role outside the organisation - was actually quite important I think because it gave you an extra dimension. It made you a bit more bullet proof, you know. It's a bloody survival game running a big outfit. They get rid of you - they'll try and get rid of you. You've got apparatchiks, you've got politicians you've got [the opposition, you've got lobbyists who can be very sinister, and very powerful]. You might have done a good job for such and such a party and the new one thinks that you're aligned with the old one and you must go. This kind of stuff. [Or you've blocked some dishonest deal and somebody's angry]. You've got to have personal credibility, personal profile, and you've really got to play a survival game and if you don't do that then you won't survive.

DAA For the want of using a cliché I feel that much of what you're saying to me is really rather like 'putting money in the bank for a rainy day'?

JG Well in a way.

DAA With regards to the community I suppose the cost of water is an issue and particularly for people in the community that are not so well off?

JG Yes.

DAA How is that managed?

5/15 JG Well, if you look at the rates - if you look at the charges - the first 150 kilolitres [noting that] the average house probably consumes something less than 300 you can get by on 150 relatively easy if you don't have a quarter acre block. So, the first 150 is very cheap so really that's the way it's handled. It's not terribly accurate because if you had 10 poor people living in the one house then they probably should have 450 at that low rate but we don't charge on the basis of people we charge on the basis of properties.

DAA Of course.

JG I guess that's the way it's done. The other thing though is that if you look at water as a proportion of household expenditure it's not very high compared with mobile phones and power and all this sort of other stuff [like] petrol. And if you compare it with - I mean sewerage charges are pretty high Doug they're quite [high] compared with water. People don't usually dissect their bill but if you look at sewerage versus water a large proportion is for sewerage.

DAA I've said to people in the past 'how much are you prepared to pay to have a tonne of something delivered to your door and how much does a tonne of water cost?'

JG Exactly. That's right.

DAA Cents, isn't it?

JG That's right. I don't know it's less than two bucks anyway.

DAA Just on a slightly different aspect of the community the water awards were initiated?

JG Yes.

DAA Were they successful?

JG I don't know. I don't really have an answer to that. You have to ask somebody else about that I'd say.

DAA Fair enough.

JG I don't have a measure of whether they were successful. No, I'm afraid I don't. I don't know.

DAA Alright. Okay, well, I think that's dealt with the issue of community?

JG Yes.

5/17 DAA I would like to come now to the issue of your personal honours. In a matter of fact way.

JG Yes, sure.

DAA Now, you've had a wide range of honours. One that comes to my mind at the moment is the Civil Engineer of the Year for Australia 2006.

JG That was good yes, yes.

DAA Which I think was quite a compliment wasn't it?

JG It was, yes. That was very good actually.

DAA I mean that's a national award?

JG It is a national award and I must say I very much appreciated it. I value that one a lot; it's very good. It's good to have a professional body such as ours and it's fantastic to get that sort of recognition from it, so it was good. I guess I knew we were doing a good job as an organisation in some ways. You know it's an amazing thing when you go and take over a water utility and it stops raining. It's a fantastic opportunity Doug - that's what it is.

5/18 DAA Yes. It's an opportunity as well as a threat?

JG Well it is that but what a fantastic opportunity.

DAA But the opportunity's there, isn't it?

JG It means that you've got a mandate [and] you have to become influential publically and politically. It means you've got to demand more money. You've got to paint the scenarios. You've got to diagnose where we're at, you've got to communicate, you've got to produce the solutions, you've got to have the staff on side and there's a whole bunch of things. It's a fantastic God-given mandate to get on and do a whole bunch of stuff.

Imagine coming in to [that]. I always thought when Sue Murphy took over I said to her 'look Sue I think your job's a lot more difficult than mine because we're well on the way now, as you know, Sue'. She'd had a key part in to solving the water problem and [I said] 'you don't have the same pressing terribly urgent problem as I had. What I had was a luxury - a fantastic opportunity - your job's a bit more difficult now because you've got to chart a course for the organisation in less obvious circumstances. You don't have the God-given mandate to spend squillions and get on and do this and that'. That's what I think. So, I was lucky, bloody lucky,

DAA You were lucky, yes.

JG Oh fantastic.

DAA Yes, but you also grasped the nettle?

JG Yes, well, there was no choice.

DAA There was no choice was there?

JG No, there was no choice. Well there was a choice. You could go and hand over to somebody else to grasp the nettle but that's not what things are all about is it?

DAA No.

JG So that's the way I looked at it. I thought 'oh this is terrific'.

5/20 DAA Alright well going on then you also were awarded the International Water Association's Grand Award?

JG Well that was great, yes.

DAA So that's international recognition?

JG That was a great thing to get and I think that again it was just having [recognition]. I must say it was great to come in from outside into the Water Corporation because you came in [and] you didn't own anything. I didn't own 'Perth Water Future'. I could immediately challenge it and then you had this threat from the climate and then world-wide it was an issue that became recognised - I mean admittedly partly.

We went to international forums and talked about it. It was also happening in California - Southern California - to an extent. Slightly different issues but the same sort of drying and so it really became a thing of international interest. And so, we talked about it and I ended up in a position of leadership effectively. That was again good fortune Doug.

5/21 DAA Mmm good - not only good fortune but good fun?

JG Yes, it was good. It was very good.

DAA Talking about good fun you were the Chancellor of Curtin University?

JG I was, yes.

DAA And you obviously had a detailed involvement with the university?

JG Yes, I was only there for three years Doug and I guess I'd sort of intended going on for a lot longer but various things [changed in my life which] made me think about life differently. My wife is French and I came around to thinking she'd been here since 1972 and I thought 'well we should spend more time in France. It's almost her turn.' And the other thing was that I'd managed to - I always believe in succession planning you see. So that I was very proud when Sue Murphy got the Water Corp job. At Curtin, I'd plucked out of the business school advisory board a chap called Colin Beckett who was a Cambridge man. He was a senior executive in Chevron who was nearing retirement. He was a class act [and] I got him on to the

[Curtin] Council. And he was, pretty obviously, a good man to succeed [me]. So, having done that I thought maybe I'll move on - and that's what happened.

So that was the logic behind it all and, I think, I'm pretty pleased with the way it's gone since then.

DAA I think Curtin gave you an Honorary Doctorate didn't they?

JG They did too. Yes, they did.

DAA Which is a great compliment?

JG Yes, that is. Yes, that's very nice.

DAA Alright. Now you were President of Engineers Australia?

JG Yes, I was. I was chairman in those days.

DAA Right and that was what 1992?

JG I can't remember the dates I'm sure you've got them there

DAA I think so yes. WA Division.

Alright. You were made an Officer of the Order of Australia?

5/23 JG Yes, that's right.

DAA Another national honour?

JG Yes, well that's good.

DAA But that's the whole man that is looking at isn't it?

JG It is. Yes, that's right.

DAA Oh, it's a compliment. It's very nice.

JG It's good, yes.

DAA Alright are there any honours that you've been given that I've overlooked?

JG Don't think so. No.

DAA No?

JG No. That's about it. Yes, that's it. You've got the lot Doug I'd say.



DAA     Alright. Okay well I think that's it Jim. Now if there's anything that I've missed or anything you'd like to add now's your chance.

JG       Sure, okay, I'll give you a ring. Now's my chance?

Umm I don't know. I think we probably covered it pretty well, Doug. I'm now retired.

DAA     Yes, and still busy. So, what's the future hold for you?

JG       Well, I guess it's a lot of family stuff. I've got three daughters and seven grandkids and spend a lot of time mucking around with them and a lot of recreational sort of stuff [like] hiking and biking and paddling.

DAA     You like the bush, don't you?

JG       I love the bush. I don't spend enough time in the bush. I've done a number of expeditions to the Kimberley. I love doing that. I [injured] my back a few years ago so I can't carry 20-odd kilograms any more but I'll still get to the Kimberley. I adore that. I like the rock art up there and I just love being up there.

And I think we'll go camping more and more. I haven't taken on any directorships and I'm not really on any committees and that sort of thing. I decided to make a complete break actually. I did the Curtin thing for sure but since then I've decided not to take [on anything else]. I'm tempted to quite often but I've sort of [backed away].

DAA     Well I can't remember who said it but the phrase 'it's a good man who knows when to quit' comes to mind.

JG       Yes, well to an extent that's it. I always thought the family thing is very important. Maybe I don't do quite enough but you know I think it's [important]. I guess I'm enjoying life - and the Water Corp - I mean I was CEO for 20 years of Railways and the Water Corp.

DAA     It's a long time.

5/26     JG       Yes. You do actually get to - I mean I could mentor people I suppose. I can talk. I'm happy to talk to anybody but the natural role would be

company directorship but at 20 years at the top you become quite 'hands-off' generally and you're not necessarily that good at doing 'hands-on' stuff. You have to recognise that. You're not in touch technically any more.

You can be a company director - but then you've got to think about the sort of company you keep when you're a company director - and you've got to be very, very careful about all that and liabilities and that sort of stuff.

So, I've thought about all that sort of stuff and I don't suffer from 'relevance deprivation syndrome' and I don't really admire people who do. So that's me.

DAA I think you and I are fairly similar.

JG What you see is what you get.

DAA Okay. Alright Jim well thank you for talking to me.

JG Okay, righto Doug. It's been a great pleasure.

DAA I've enjoyed that.

JG Yes, good fun.

DAA It's been fascinating. Okay, thank you very much.

JG Okay.